OPTICUM™

Dekoder STB • HD T90

User Guide

For Digital Terrestrial Receiver

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At a Glance 1

Read this chapter to learn about Opticum HD T90 and Dekoder STB features, remote control and more.

1.1 Overview

1. Support of SD/HD (MPEG2/MPEG4, H.264), DVB-T,
2. PVR Ready - possibility to record on external USB drive,
3. Time Shift (video pausing, rewinding),
4. HDMI video output,
5. Low power consumption in Standby mode,
6. Automatic Stand-by mode,
7. Electronic Power Guide - EPG,
8. Multilingual menu, including English.

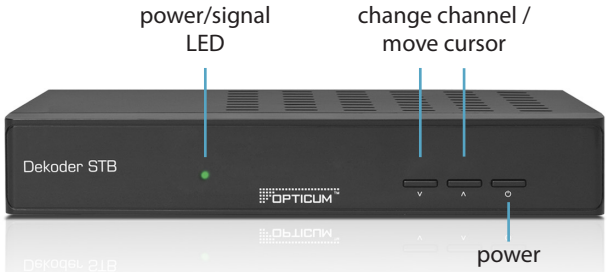
1.2 Kit Contents

1. Receiver,
2. Remote Controller,
3. Batteries — 2 x AAA (optional),
4. Quick Start Manual.

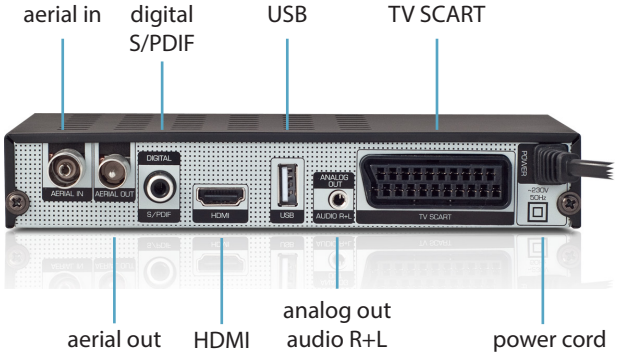
1.3 Front Panel

HD T90

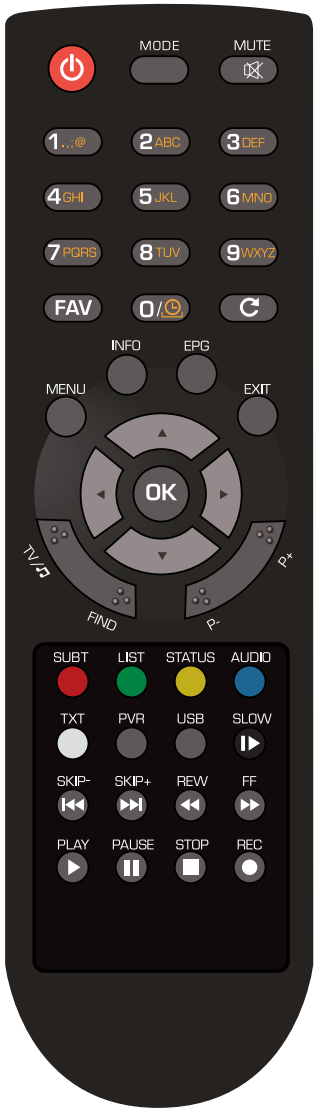
Dekoder STB



1.4 Rear Panel



1.5 Remote Controller



Button	Function
POWER - ⏻	Switch receiver on from standby mode.
MODE	Select video output resolution.
MUTE - 🔇	Enable or disable the audio.
numeric buttons	Select channel or enter programming parameters.
🕒	Switch between Sleep Timer Off 10/30/60/90/120 minutes.
FAV	Set current channel as favorite. Switch to the favorite channel.
LAST - ↻	Switch to the previous channel.
MENU	Display the Main Menu on the screen or return to the previous menu or status.
INFO	Display information banner of current service.
EPG	Display Electronic Program Guide on screen.
EXIT	Cancel the user selection and return to the viewing mode from the menu.
◄ / ►	Adjust volume level or move cursor left or right in the menu.
▼ / ▲	Change channel or move cursor up or down in the menu.
OK	Display channel list on screen. Select an item in menu.
TV/♫	Switch receiver between TV and radio mode.
FIND	Enables to find channels by name.
P-/P+	Move cursor to next or previous page.
SUBT	Set up subtitles.
LIST	Optional function.
STATUS	Display receiver status window.
AUDIO	Set up audio channels.
TXT	Display teletext information for current channel (if available).
PVR	Display record list.
SLOW, SKIP-, SKIP+, REW, FF, PLAY, PAUSE, STOP, REC	Video functions (time shift, playing, recording).
colored buttons	Different functions per menu.

Installation 2

Read this chapter to learn how to connect the receiver to a TV set, configure the receiver, use USB drive and more.

2.1 Connection

1. Connect an antenna to receiver's AERIAL IN connector.
2. Using HDMI cable connect the receiver with flat panel TV or
3. Using SCART cable connect it with classic TV.
4. At the end connect the main cord to the main socket.

2.2 Starting up for the first time

Turn on the TV Set. After a while on TV Set you should see receiver's OSD. If the TV Set is not displaying receiver's OSD, probably a signal source is set wrong. Check the TV Set documentation for information how to change the signal source.

Generally once the receiver is switched on, the Welcome Screen emerges. To enter Installation Guide menu use **OK** button on the remote control or wait few seconds.

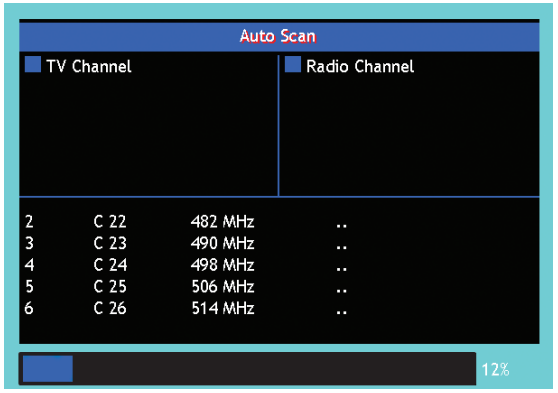
1/5 Select language	Using ▼/▲ buttons choose menu language. Confirm your choice using blue button on remote control.
2/5 Choose tv and aspect	Using ▼/▲ buttons choose TV and aspect mode. Choose 4:3 for standard TV or 16:9 for flat panel TV (LCD,LED). You can also choose option that your TV will manage aspect recognition (SCART connection is required). Confirm your choice using blue button on remote control.
3/5 Select menu style and color	Using ▼/▲ buttons choose menu color. Confirm your choice using blue button on remote control.
4/5 Select summer time	Using ▼/▲ buttons choose if you want to select summer time. It is important for proper working of EPG (Electronic Program Guide). Confirm your choice using blue button on remote control.
5/5 Select country	Using ▼/▲ buttons choose a country where you will receive terrestrial TV signal. Confirm your choice using blue button on remote control.

If you want to return to previous level in this Guide, use red button.

If after switching on the receiver, you cannot see the Installation Guide menu, use **MENU** button to enter the main menu and using ▼/▲ buttons choose **TOOLS** menu and select Load Factory Settings and confirm it using **OK** button (default password is 0000).

2.3 First Scan

After the configuration, use the blue button or **OK** on remote control to start scanning TV and radio channels. It will not happen if your antenna is not connected and properly configured.



After the end of scanning use **OK** button and then the receiver will display the first scanned channel.

Use **OK** button on remote control to display channel list. Using ▼/▲ buttons choose a channel You want to watch and confirm your choice using OK button.

2.4 Automatic Power Down

In accordance with actual European Union requirements, your receiver is equipped with function "Automatic Power Off". It works by switching the receiver into standby mode after a period of 3 hours after the last active use. In practice this means that if during this time the receiver will not be given any command by using the remote control or keypad on the front panel, the receiver turns off. Turning off the receiver will be preceded (2 minutes previous) by a relevant message on the TV screen. Please also note that this feature is enabled by default, but at your own request, you can disable it using the appropriate functions in the receiver menu.

2.5 Working with External USB Drive

During the selection and operation with USB drive (HDD, flash drive), You should pay attention to the following issues:

1. Drive is compatible with USB 2.0 and has appropriate write and read speed,
2. Drive contains one single partition, formatted in supported format,
3. If necessary, drive should be supplied from an external power supply (especially for USB hard drives),
4. Do not disconnect the drive during a write/read data operation,
5. Do not use full or fragmented drive.

2.6 Antenna Power Supply

If your antenna needs a +5V power supply - use **MENU** button to enter the main menu and using ▼/▲ buttons enter **Installation** menu, select **Channel Scan** and set Tuner Power ***ON*** and exit using **MENU** button. Next, using cursor buttons select **Auto Scan** to scan all available channels.

Operation 3

Read this chapter to learn how to use the receiver, about it's features and the menu and more to get the best performance from your receiver.

3.1 Quick Guide

To turn your receiver ON or to Standby, use the ⏻ button on the remote control. Choose the desired channel with the ▼/▲ buttons. Alternatively, you can digit the channel number with the numeric buttons on the remote control. Or press **OK** in viewing mode to display the TV Channel List. The volume can be adjusted with the ◀ / ▶ buttons.

3.2 Changing Channels

Your new receiver is equipped with several ways to change channels.

1. Via direct access using the **0—9** buttons.
2. Via the channel list through **OK** button.
3. Via the **P+**, **P-** or ▼/▲ buttons.
4. Via **EPG**.
5. Via Timer function.
6. Via the favorite channel through the **FAV** button.
7. Via the ↻ - **LAST** button.

Direct access using the 0—9 buttons

To gain direct access to a certain channel, simply input its number with the **0—9** keys on the remote control. Channel numbers can be up to four digits long. Entering a number with less than four digits is possible. Just wait a few seconds and your receiver will switch to the selected channel or press **OK** immediately after selecting the channel number.

Channel list

Press **OK** in viewing mode to display the Channel List. Use ▼/▲ in the Channel List to highlight your channel of choice and press **OK** once to select the highlighted channel. Press **OK** again to leave the Channel List.

P+, P- or ▼/▲ keys.

P+ and ▲ switches to the next channel.

P- and ▼ switches to the previous channel.

EPG

Press **EPG** button in viewing mode to display Electronic Program Guide on screen. Use ◀ / ▶ in the detailed view of EPG to change channel or in the shortened view use ▼/▲ to select a channel and press **OK** to switch to the selected channel. Press **EPG** or **EXIT** to get back to viewing mode.

Timer

Press **EPG** button in viewing mode to display Electronic Program Guide on screen. Use cursor buttons to select a channel and highlight your program of choice and press **RED** button to enter Timer function. Set Timer Service to Channel and use ▼ to navigate down to highlight SAVE and press **OK**. When the desired program will start being aired, the receiver automatically will switch to it. More functions of Timer will be describe further in the manual (page 15).

Favorite

Use **FAV** button to set current channel as favorite. While watching other channel press **FAV** to switch to the favorite one. Press **FAV** again and confirm your choice to delete the channel from favorite.

Last

Use ↻ - LAST button to switch to previously watched channel.

3.3 Sleep Timer

Press ◷ to set time after which the receiver turns off automatically. Press the button as many times as you need to set the timer. You can set the time to 10, 30, 60, 90 or 120 minutes left for receiver to turn off.

3.4 Info banner

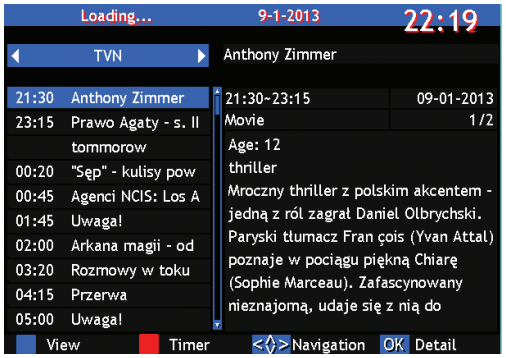
While watching TV you can press the **INFO** button any time to get information about the current channel. Press **INFO** twice for extended EPG details about the current channel. Use **BLUE** button to switch between current and the next program. Press **INFO** button three times for technical details about the current channel.

3.5 EPG (Electronic Programme Guide)

The Electronic Programme Guide is a function that allows you to i.a. view event schedules and information and to use Timer function.

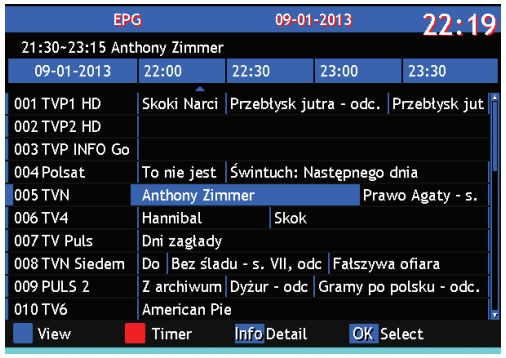
Detailed view

In the detailed view of EPG you can see a schedule of one channel on the left side and detailed info about highlighted program on the right side. Use ◄/► buttons to change the channel. To highlight other program and see informations about it use ▼/▲. If the full description of a program is not displayed use **OK** button to see more. To switch the view of EPG to shortened one use **BLUE** button. Use **RED** button to enter TIMER functions.



Shortened view

In the shortened view of EPG you can see a list of channels on the left side and shortened schedule of programs on the right side. Use ▼/▲ buttons to select the channel. Use **OK** button to switch to the highlighted channel. To highlight a program use ◄/► buttons. Use **INFO** button to see detailed informations about the program. To scroll the info use ▼/▲ buttons. Use **GREEN** button to change info language (option available for multilingual television).

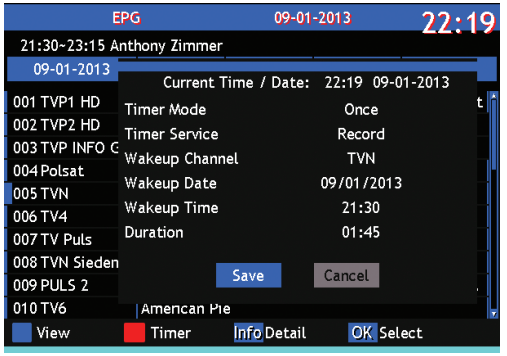


3.6 TIMER

Timer is a function you can get access to through the EPG view by pressing the **RED** button. Use cursor buttons to navigate through timer options.

Timer Mode	Choose between ***Off*** (Timer inactive), ***Once*** or ***Daily*** (Timer will be executed every day, same time).
Timer Service	Choose between ***Channel*** (Timer will wake up the receiver) or ***Record*** (Timer will start to record the scheduled event).
Wakeup Channel	Select a channel the receiver will wake up with.
Wakeup Date	Use the 0~9 buttons to input the date for the timed event.
Wakeup Time	Use the **0**—**9** buttons to input the desired start time.
Duration	Use the **0**—**9** buttons to input the timer duration.

Use ▼ to navigate down to highlight SAVE and press **OK** to activate the function. To quit the timer without saving your settings, move the highlight to CANCEL.

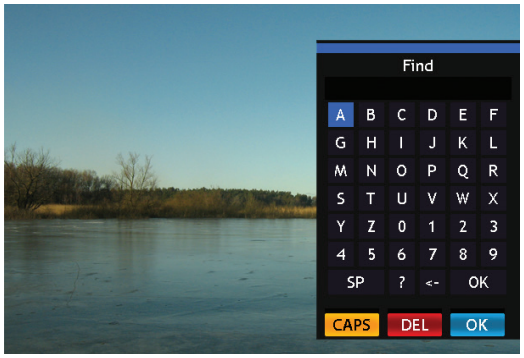


3.7 Radio channels

The receiver is adapted to receive and play radio channels that are available through digital terrestrial signal. Use **TV/♫** button on the remote control to switch between TV and radio mode. Radio channels have their own channel list and EPG and you can use most of the functions that are available for TV channels like TIMER or FIND.

3.8 FIND

FIND is an function that lets you find a channel by its name. Use the **FIND** button to display the find widget on the screen. Use cursor buttons to select desired characters and use the **OK** button to input them in the edit box. As you input the letters at the same time on the left side of the screen there is displayed a list of channels that matches your choice.



3.9 Subtitles

Some channels support a choice of subtitle languages. Press **SUBT** button in viewing mode to display a list of available subtitle languages. Select your subtitle of choice with ▼/▲ buttons and press **OK** to confirm. Press the **EXIT** button to leave without making changes.

3.10 AUDIO

Some channels support a choice of audio formats and/or languages. To select another audio stream, press the **AUDIO** button in viewing mode. A list with available audio streams will now be displayed. Use the ▼/▲ buttons to select the desired stream and confirm with **OK**. The audio channel as stereo, mono, left and right can be selected with the ◀/▶ buttons.

3.11 Teletext

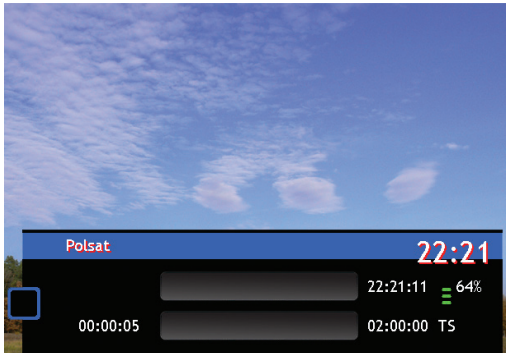
Teletext is a service that offers a range of text-based information, typically including national, international and sporting news, weather and TV schedules. To access Teletext, press the **TXT** button in viewing mode and use the **0**—**9** buttons to input the number of the page you wish to see. The colored buttons of the remote control allow you to jump to selected pages directly, as indicated on the bottom of the teletext screen. Use the ▼/▲ buttons to select one page up or down. Press **EXIT** or **TXT** to get back to viewing mode.

3.12 PVR (Personal Video Recorder)

Recording

Your receiver allows you to make a recording of any program. Press the ● (**REC**) button to start instant recording or use TIMER function to plan your recordings (more info on p. 15). To start recording first you need to connect USB storage device to the receiver. The recording time depends on the amount of free space on the USB drive. During recording, it is possible to perform the following actions:

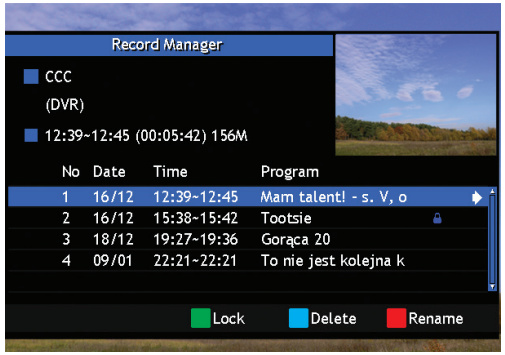
- Use the ⏸ (**PAUSE**) button to pause the program. The receiver will not stop recording.
- Use the ▶ (**PLAY**) button to play recorded program after pause.
- Use the ■ (**STOP**) button to stop recording.
- Change channels — use the ▼/▲ buttons or Channel List. This action is only available for channels of the same frequency as recorded channel. The channel which program the receiver is recording is marked in Channel List with ● ***REC*** sign.



Recordings management

Press the **PVR** button to display a records list. Use the ▼/▲ buttons to highlight your recording of choice. You can perform following actions with the selected recording:

- Use **OK** to start playing the recording.
- Use **GREEN** button to lock the recording. Use the **0**—**9** buttons to input the password to secure the record from undesirable access. The recording will be marked with the icon. To play the recording next time, the receiver will ask for the password.
- Use **BLUE** button to mark recording with the **x** icon. The next time you exit the records list the recording will be deleted. Press the **BLUE** button again to unmark the recording and prevent it from being deleted.
- Use **RED** button to rename the recording. The default name for the recording is a name of the channel.
- Use ▶ (**PLAY**) button to play a preview of the recording and use ⏸ (**PAUSE**)or ■ (**STOP**) button to stop the preview.



Playing recordings

Press the **PVR** button to display a records list. Use the ▼/▲ buttons to highlight the recording you wish to play and press **OK** to start playback. During playback, it is possible to perform the following actions:

- Use ⏸ (**PAUSE**)button to pause the playback.
- Use ▶ (**PLAY**) button to resume playback at normal speed.
- Use ▶▶ (**FF**)button for fast forward or the ◀◀ (**REW**)button for fast rewind during playback. Press the button as many times as you need to set preferred speed (x2, x4, x8, x16, x24).
- Use ■ (**STOP**) button to stop playback and return to records list.
- Use ▮▶ (**SLOW**) button to slow down the playback. Press the button as many times as you need to set preferred speed (x1/2, x1/4, x1/8).

- Use ⏮ (**SKIP–**)or ⏭ (**SKIP+**)buttons to skip forward or backward. You can set the time of jump in the menu REC. See chapter XXX (p. 111) for details.
- When the time banner is on screen (activated by pressing **OK** button), use the ◀/▶ buttons to set a marker on the progress bar and press **OK** to jump to that moment in playback.

3.13 Time Shift

Time Shift allows you to pause live broadcasts and resume playback later. First activate Timeshift in REC, DVR Configuration to ***ON*** and connect your external USB storage device. See chapter DVR Configuration (p. 31) for details.

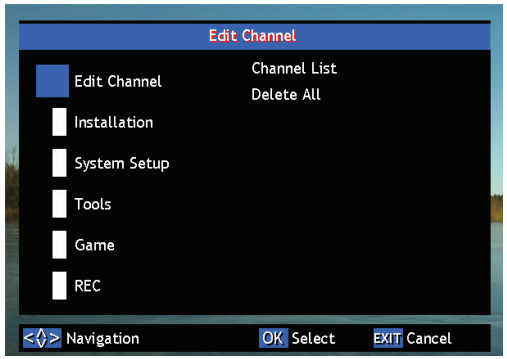
- Press ⏸ (**PAUSE**) in viewing mode to start this mode. A time banner will appear shortly on screen.
- Press ▶ (**PLAY**) to resume Timeshifted playback. Press ◀◀ (**REW**) / ▶▶ (**FF**) for Fast rewind / Fast forwards.
- Press ■ (**STOP**) to return to live TV.

Menu 4

Read this chapter to learn how to use the receiver's menu, how to adjust the receiver to fit your needs and more.

4.1 The Main Menu

To access the main menu, press the **MENU** button in viewing mode. Use cursor buttons to navigate through the menu. Use **OK** button to select a submenu. Press **EXIT** or **MENU** to return to the previous screen.



4.2 Edit Channel

Use ▼/▲ to select **Edit Channel** and press **OK** or ▶ to enter. Use ▼/▲ to highlight the desired submenu and press **OK** to select. Press **EXIT** or **MENU** to get back to the main menu.

Channel List

Select **Channel List** with ▼/▲ and press **OK** to enter. In this menu you can manage the Channel List.

Move To enable the Move function, press **WHITE** while in **Channel List**. The Move symbol on the top of the screen will move up to indicate that the Move function is selected. Use ▼/▲ to highlight the desired channel and press **OK** to select it and mark it with ⬍. You can now move the selected channel up or down the channel list using ▼/▲. Once the channel is on the desired position, press **OK** again. The channel is now fixed on its new position. Once all changes are made, press EXIT twice. A confirmation banner will pop up. Select ***Yes*** to save the changes or ***No*** to discard.

Delete Press **RED** while in **Channel List** to enable the Delete function. The Delete sign will move up to indicate that Delete is selected. Use ▼/▲ to highlight the desired channel and press **OK** to mark it for deletion with **X**. Press **OK** again to unmark it. Once you have marked all channels you wish to delete, press **EXIT** twice. A confirmation banner will pop up. Select ***Yes*** to delete the marked channels or ***No*** to cancel.

Edit Press **GREEN** while in **Channel List** to enable the Edit function. The Edit sign will move up to indicate that Edit is selected. Use ▼/▲ to highlight the desired channel and press **OK** to select it. A text field will now pop up at the right of the screen. Use cursor buttons to select the desired characters and enter them with **OK**. Once you have finished editing, press **BLUE** to enter the changes. Once all changes are made, press **EXIT** twice. A confirmation banner will pop up. Select ***Yes*** to save the changes or ***No*** to discard.

Lock Locked channels can only be watched after entering the password (Default password is **0000**).
To lock or unlock a channel, press **YELLOW** while in **Channel List**. The Lock sign on the top of the screen will move up to indicate that the Lock function is selected. Use ▼/▲ to select the desired channel and press OK to lock or unlock it. You are asked to input the password. Locked channel will be marked with the 🔒 symbol. Locking/unlocking multiple channels in one session is possible. Once all changes are made, press **EXIT** twice. A confirmation banner will pop up. Select ***Yes*** to save the changes or ***No*** to discard.

Skip Channels marked with Skip will be skipped when changing channels with the ▼/▲ buttons. Despite that, these channels are still available from the channel list. To mark channels for skipping, press **BLUE** while in **Channel List**. The Skip symbol on the top of the screen will move up to indicate that the Skip function is selected. Use ▼/▲ to select the desired channel and press **OK** to mark or unmark it for skipping. Channels set for skipping will be marked with the ↷ symbol. Once all changes are made, press **EXIT** twice. A confirmation banner will pop up. Select ***Yes*** to save the changes or ***No*** to discard.

Delete All

Use this function to delete all stored channels. Select **Delete All** with ▼/▲ and press **OK**. A confirmation banner will pop up. Select ***Yes*** to save the changes or ***No*** to discard.

The **Delete All** function will permanently delete all current channels from your receiver, and you are not able to leave the menu until you search for channels again.

4.3 Installation

Use ▼/▲ to select **Installation** and press **OK** or ▶ to enter. Use ▼/▲ to highlight the desired submenu and press **OK** to select. Press **EXIT** or **MENU** to get back to the main menu.

Auto Scan

Select **Auto Scan** with ▼/▲ and press **OK** to enter. A confirmation banner will pop up. Select ***Yes*** to start scan or ***No*** to discard. The **Auto Scan** may take several minutes. The receiver will store all newly found channels in the channel list.

Channel Scan

Select **Channel Scan** with ▼/▲ and press **OK** to enter.

Scan Mode — Use ◀/▶ to toggle between available scan modes: ***By Channel*** and ***By Frequency***.

If ***By Channel*** is selected, use the cursor buttons to set **Scan Band** and **Ch No.** (Channel Number).

If ***By Frequency*** is selected, use the cursor buttons to set **Frequency** and **Bandwidth**.

Tuner Power (+5V) — Set to ***On*** if you use an active antenna. When set to ***On***, 5 V will be present on the Aerial In connector of the receiver. Select ***Off*** for passive antenna.

Highlight **Search** and press **OK** to start scanning.

Scan Settings

Select **Scan Settings** with ▼/▲ and press **OK** to enter.

LCN	If LCN (Logical Channel Numbering) is activated and an LCN signal is provided by the operator, channels will be stored in an operator defined order. Set LCN to ***On*** to activate operator defined channel numbering or ***Off*** to store channels in found order.
Allow mux repeating	Use ◀/▶ to toggle between ***On*** or ***Off***. Set Allow Mux (Multiplex) repeating to ***ON*** if you want the receiver to scan for channels from the same multiplex on different frequencies. This allows the receiver to search for channels with the best signal.
Tuner Power (+5V)	Use ◀ / ▶ to toggle between ***On*** or ***Off***. Set to ***On*** if you use an active antenna. When set to ***On***, 5 V will be present on the Aerial In connector of the receiver. Select ***Off*** for passive antenna.
FTA only	Use ◀ / ▶ to toggle between FTA Only ***On*** or ***Off***. When FTA Only is set to ***On***, scrambled channels won't be stored in the Channel List.
Sort priority	Use ◀ / ▶ to toggle between ***HD Channels***, ***Higher MUX***, ***Lower MUX*** or ***SD Channels***. Your choice indicates which method will be used by the receiver when creating Channel List.

Once all changes are made, press **EXIT**. A confirmation banner will pop up. To save changes you have to scan channels. Select ***Yes*** to scan channels or ***No*** to discard.

Transmitter list

Use this function to test the signal and to adjust your antenna. Select **Transmitter list** with ▼/▲ and press **OK** to enter. The receiver will display the list of territorial units of your country. Use ▼/▲ to select your location and press **OK** to enter. On the next screen there is displayed a list of transmitters in your territorial unit. Use ▼/▲ to select a transmitter of your choice and press **OK** to enter. Select Multiplex of your choice with ▼/▲ and press **OK** to enter. On the next screen you can see the signal intensity and signal quality bars and you can adjust your antenna to the best results. Press **OK** to start scanning channels.

4.4 System Setup

Use ▼/▲ to select **System Setup** and press **OK** or ▶ to enter. Use ▼/▲ to highlight the desired submenu and press **OK** to select. Press **EXIT** or **MENU** to get back to the main menu.

Language

This menu allows you to set up your language preferences. Select **Language** with ▼/▲ and press **OK** to enter.

Language	Use ◀ / ▶ to select the desired language for the On Screen Display.
Subtitle Language	Use ◀ / ▶ to select the preferred subtitle language.
Teletext	Use ◀ / ▶ to select the preferred teletext language (when available.)
EPG language	Use ◀ / ▶ to select the desired language for the EPG

TV System

Use this menu to match your receiver to your TV set. The following settings are available:

Video Resolution	Use ◀ / ▶ to toggle between ***480i*** up to ***1080p***. Use settings that matches your TV's specifications. After a selection is made, you will be asked to confirm.
Aspect Mode	Use this option to select the aspect ratio of your TV and the preferred conversion method. Options are: ***Auto*** (automatic detection of aspect ratio), ***4:3PS*** (panscan - displays 16:9 widescreen broadcasts full screen on your 4:3 TV), ***4:3LB*** (letterbox - black bars on top and under the picture on a 4:3 TV) and ***16:9*** (use this setting for 16:9 TV sets).
Video Output	Use this option to select the connection to your TV set. Select ***HDMI*** or ***RGB***. On TV SCART only the ***RGB*** signal is available.
Digital Audio Output	Toggles between ***PCM*** and ***PCM + Dolby*** output. When ***PCM*** is selected, all audio will be converted to stereo audio. ***PCM + Dolby*** enables multi-channel audio on the digital output to be used with home cinema sets.

Local Time Setting

In this menu you can set up your region and time zone. Select **Local Time Setting** with ▼/▲ and press **OK** to enter.

Region	Use ◀ / ▶ to select the region you live in.
GMT Usage	Set to ***On*** for broadcaster defined time or to ***Off*** to input time and date manually.
GMT Offset	Allows you to adjust the time zone you live in. This option is only available when GMT Usage is set to ***On***. The GMT Offset range is "***-11:30 — +12:00***", increasing by half hours progressively. The cities matching the set GMT Offset are displayed at the bottom of the screen.
Summer Time	Select ***Off*** or ***On*** to add one hour extra for summer time during the summer.
Date	Date and Time settings are available only when GMT Usage is set to ***Off***. Use the 0~9 buttons to enter the date. Press EXIT to proceed.
Time	Date and Time settings are available only when GMT Usage is set to ***Off***. Use the 0~9 buttons to enter the date. Press **EXIT** to proceed.

Timer Setting

This menu allows you to set up to 30 timed events for recording or waking up the receiver. Use ▼/▲ to select **Timer Setting** and press **OK** to enter.

The receiver will display a list with 30 timers, followed by their respective status. Select the timer you wish to set or change with ▼/▲ and press **OK** to proceed. The timer setup menu will now be displayed. See chapter Timer (p. 15) for details.

Parental Lock

This menu allows you to protect the installation menu and/or channels with a password. You can also enter a new password in the Parental Lock menu. Use ▼/▲ to select **Parental Lock** from the and press **OK** to proceed. You will be asked to enter your password. (Default password is: 0000).

Menu Lock	Locks the installation menu. You can set Menu Lock to ***On*** or ***Off***.
Channel Lock	Choose between: ***Off***, ***AGE 4***, ***AGE 5***, up to ***AGE 18***. Channels with a parental rating above the chosen age will be protected with a password (if available in your local broadcast.)

New Password	Use the 0–9 buttons to enter your new password (4 digits) here.
Confirm Password	Re-enter your password here to confirm.

OSD Setting

This menu allows you to change settings for OSD appearance and more. Use ▼/▲ to select **OSD Setting** and press **OK** to proceed.

Subtitle Display	Use ◀ / ▶ to toggle between ***On*** or ***Off***. Set to ***On*** if you want to see subtitles on the screen.
OSD Timeout	Use ◀ / ▶ to set the time after which on screen banners and messages disappear. The range is 1–10 seconds.
Menu Style	Use ◀ / ▶ to change color of OSD.
OSD Transparency	Use ◀ / ▶ to set the OSD transparency from ***Off*** to ***40%*** with 10% steps.
Volume step	Use ◀ / ▶ to toggle between ***x1*** or ***x2*** to set the step for changing volume.
Load default OSD settings	Press **OK** to clear all OSD settings and reset to default values.

Auto Standby

Auto Standby is a new feature that helps you with reducing power consumption. See chapter Automatic Power Down (p. 11) for details.

Auto Standby	Use ◀ / ▶ to toggle between ***On*** or ***Off***. When set to ***On***, the receiver will turn to standby if it doesn't receive any commands from the remote control for three hours. Set Auto Standby to ***Off*** to avoid the automatic shut down.
Turn on after blackout	Use ◀ / ▶ to toggle between ***On*** or ***Off***. Set to ***On*** if you want the receiver to automatically turn on after a blackout.

4.5 Tools

Use ▼/▲ to select **Tools** and press **OK** or ▶ to enter. Use ▼/▲ to highlight the desired submenu and press **OK** to select. Press **EXIT** or **MENU** to get back to the main menu.

Information

This submenu shows receiver specific information such as hardware version and software version. Please have the Information screen on hand when you call our hotline. The person who answers your call might ask for the information given in this screen.

Load Factory Settings

This option allows you to reset the receiver to factory settings, which clears all your settings and stored channels. It will restore your receiver to an "out of the box" state. Use ▼/▲ to select **Load Factory Setting** in the Tools menu and press **OK**. You are asked to input password. Input the correct password using the **0–9 buttons** (default password is: 0000). A confirmation window is displayed. Select ***Yes*** to return to factory settings. Select ***No*** if you don't want to restore. Press **EXIT** to leave.

Upgrade by RS232

This option is highly recommended to be used only by advanced users. Upgrade by RS232 allows you to upgrade your receiver's software via RS232 cable connected to your computer. You must use an external converter to connect RS232 to SCART connector. Use ▼/▲ to select **Upgrade by RS232** and press **OK**. Select **START** and press **OK** or ▶ to start upgrading. Press **EXIT** to leave.

S/W upgrade by OTA

This receiver is equipped with an Over The Air software upgrade option. An Over The Air update might not be available in your region. Please contact your local service hotline for more information about this option. Use ▼/▲ to select **S/W upgrade by OTA** and press **OK**. Select START and press **OK** or ▶ to start upgrading. Press **EXIT** to leave.

Upgrade by USB

This feature allows you to upgrade your receiver's software via the USB port. If new software is available for your receiver, it can be downloaded from our website www.opticum.com.pl.

Place the software file (unzipped) in the root directory of your USB storage device (HDD, memory stick etc.) and insert this device into the USB port of the receiver. Select **Upgrade by USB** from the **Tools** menu and press **OK** to proceed. The upgrade menu will now be displayed.

Use ▼/▲ to select Upgrade File and choose the file containing the new software. Once all settings are made, move the highlight to Start and press **OK** to start the upgrade process.

After an update the receiver restarts automatically. During the upgrade process NEVER disconnect the receiver from the mains or switch off the power! Doing so might damage your receiver and will void warranty!

If, after a software upgrade, the receiver should behave in an unexpected way, please perform a factory reset as well. See chapter **Load factory settings.**

USB device

This function allows you to access and play files (MPEG, AVI, MP3, JPG and many other type — see details in technical part) from your connected USB storage device. Use ▼/▲ to select **USB Device** in the Tools menu and press **OK** to proceed. Use ▼/▲ to browse the connected USB device and use **OK** to open folders. Press **OK** to play the highlighted selection.

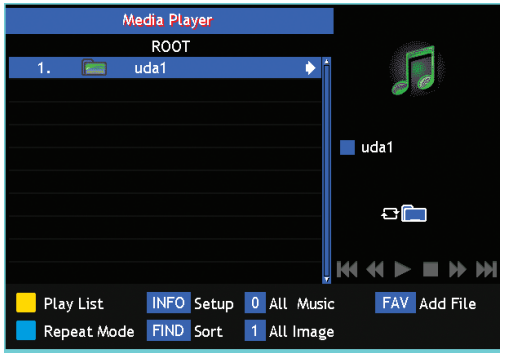
Play List		Use **YELLOW** button to display a list of files. Choose between ***Music*** or ***Image*** with ◀/▶.
	Play	While in Play List window use **RED** button to start slide show or play music.
	Delete	While in Play List window use **YELLOW** button to mark a highlighted file with **x** to delete it. You can select more than one files. Press **OK** to confirm your choice. A confirmation banner will pop up. Select ***Yes*** to save the changes or ***No*** to discard. The receiver will play the files.
	Delete All	While in Play List window use **BLUE** button to delete all files from the list. Press **OK** to confirm your choice. A confirmation banner will pop up. Select ***Yes*** to save the changes or ***No*** to discard. The receiver will play the files.
Repeat Mode		Use **BLUE** button to toggle between 3 repeat modes:
	1	— repeat one selected file,
		— repeat contents of the folder,
	1 2 3	— repeat contents of the folder at random.

Setup		Use **INFO** button to enter Setup menu.
	Slide Show Time	Use ◀/▶ to set the time for displaying a slide. The range is 1–10 seconds.
	Slide Show Repeat	Use ◀/▶ to toggle between ***On*** if you want the receiver to repeat a slide show or ***Off***.
		Once all settings are made, select ***Save*** to save settings or ***Cancel*** to discard them.
Sort		Use **FIND** button to define sequence of files in play list. Available option are: ***Default***, ***Name (A-Z)***, ***Name (Z-A)***, ***Image 1st***, ***Music 1st***.
All Music		Use **0** button to select all music in folder.
All Images		Use **1** button to select all images in folder.
Add File		Use **FAV** button to add selected files to play list.

During a slide show you can perform several actions to improve it:

Rotate	Use ◀/▶ buttons to rotate a picture by 90°
Change slide	Use ▼ to change to the previous slide. Use ▲ to change to the next slide.
Slide show options	Press **OK** to display slide show options for changing slides. Available options are: ***Manual***, ***Auto 2s***, ***Auto 5s***, ***Auto 30s***, ***Auto 60s***.

Press **EXIT** or **MENU** to get back to the **USB device** menu.



Save to USB

This function allows you to save the current software of you receiver to your USB storage device. Use ▼/▲ to select **Save to USB** in the Tools menu and press **OK** twice to proceed. Do not remove your USB device during the process.

Remove USB device safely

Use this function to eject your USB device before you remove it manually from the receiver. This will prevent any danger of data loss. Use ▼/▲ to select **Remove USB device safely** in the Tools menu and press **OK**.

4.6 Game

Your receiver is equipped with two games which can be played on your TV screen using the receiver remote control. Use ▼/▲ to select **Game** from the Main menu and press **OK** or ▶ to proceed.

Select one of the available games (***Othello*** or ***Sudoku***) using ▼/▲ and press **OK** to start the game. Follow the directions on screen.

Use **EXIT** to quit a game.

4.7 REC

The **REC** menu consists of the following submenus: Record Manager, USB Information, HDD Format and DVR Configuration. Use ▼/▲ to highlight the desired menu and press **OK** to enter. Press **EXIT** to quit.

Record Manager

The **Record Manager** gives you access to previously recorded events. Select **Record Manager** from the REC menu and press **OK** to enter. Use ▼/▲ to highlight the recording you wish to play and press **OK** start playback. Press **EXIT** to exit. See more information in chapter Recordings management (p. 17).

USB Information

This option shows relevant information about the connected USB device. Select **USB Information** from the REC menu and press **OK** to enter. Press **EXIT** to leave.

HDD format

The **HDD format** menu allows you to format the connected USB device.

Formatting will permanently delete ALL data stored on the connected device.

Please make a backup copy of all data you wish to keep before entering the **HDD Format** menu. Select **HDD Format** from the REC menu and press **OK** to enter. Use ◀ / ▶ to select the partition you wish to format (Partition 1 is set per default) and press ▼ to highlight Format. Press **OK** to proceed, select ***FAT NTFS*** or ***Cancel***, or press EXIT to leave without formatting.

DVR Configuration

This menu allows you to make settings for Time Shift and recording. Select **DVR Configuration** from the REC menu and press **OK** to enter. Use ▼/▲ to move the highlight and ◀ / ▶ to change settings. Press **EXIT** to quit.

Timeshift	***On*** or ***Off***. When Time Shift is set to ***Off***, Time Shift becomes inactive.
Record Type	***TS*** or ***PS***. When ***TS*** is selected, recordings will also include subtitles and teletext (when available). ***PS*** makes recordings without these extras.
Record Selection	Select the partition the receiver will record on.
Standby after record	***On*** or ***Off***. Select if receiver must go to standby mode after Timer record.

Jump

This function allows you to define the jump step length in playback mode. Select **Jump** from the REC menu and press **OK** to enter. Use ◀ / ▶ to change settings. Possible settings are 0.5/1/5/10/30 minutes.

Troubleshooting 5

There may be various reasons for abnormal operation of the receiver. Check the receiver according to the procedures shown below. If the receiver does not work properly after checking it, please contact your dealer or the local Service Hotline. Do NOT try to open or disassemble the receiver. It may cause a dangerous situation and void warranty.

Problem	Possible Cause	Suggested solution
No power	The power cord has not been well connected	Plug the power cord into the outlet tightly and turn on the power; if no power still, turn off the power again, and turn it on in 5-10 minutes
No signal found	Aerial is disconnected	Check aerial lead
	Aerial is damaged/ misaligned	Check aerial
	Out of digital signal area	Check with dealer
	Active antenna requires to switch ***ON*** antenna power/ external power	Switch receiver's Antenna Power ***ON***/connect external power
No picture or sound on TV	HDMI is not selected on your TV or Amplifier	Switch to correct TV input
	HDMI is set to higher resolution than your TV supports	Select lower resolution on receiver
Scrambled channel Message	Channel is scrambled	Select alternative channel
No response to remote control	Receiver off	Plug in and turn on the receiver
	Remote not aimed correctly	Aim remote at front panel
	Front panel obstructed	Check for obstructions
	Remote batteries exhausted	Replace remote batteries
	Batteries connected incorrectly	Connect batteries correctly
	Beyond the effective operation range	Operate within normal range
Audio sounds and subtitles language are not the chosen items	The right language channel has not been chosen	Set the right language channel in the menu
No sound at all	The unit is in mute status	Cancel the mute
	Volume is set at too low level	Augment the volume
	Cable is connected incorrectly	Connect the cable correctly
Serious distortion or cannot receive signal normally	Too much interferential signal	Adjust the antenna
The receiver switches off automatically	Auto Standby function enabled.	Disable auto standby

Safety Precautions

6

ATTENTION:

Warning: The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to „dangerous voltage" and to prevent from a risk of electric shock.

Warning: To reduce the risk of electric shock, don't open the cabinet. Refer servicing to qualified personnel only.

Warning: The exclamation point within an equilateral triangle is intended to alert the user to important operating and maintenance (servicing).

Warning: Do not use this receiver where contact with or immersion in water is a possibility. Do not use near flower vase, wash bowls, kitchen sinks, laundry tubs, swimming pools, etc.

Warning: Do not put the candle or lamp stand on the cabinet; otherwise, there is the danger of fire.

Warning: The unit should be connected to a power supply only of the type described in the operating instructions or as marked on the unit. If you are not sure of the type of power supply (for example, 120 or 230 V) to your home, consult your local dealer or local power company.

Warning: This product install diodes. Do not open the cabinet or touch any parts in the inner mechanism. Consult your local dealer for technical service if the opening is required.

Note: To ensure proper use of this product, please read this User manual carefully and retain for further reference.

Note: This product install diodes. Do not open the cabinet to avoid the unit direct exposure to radiation.

Unit Cleaning: After the unit power is turned off, you can clean the cabinet, panel and remote control with a soft cloth lightly moistened with a mild detergent solution.

Attachments: Never add any attachments and/or equipment without the manufacturer consent; as such additions may result in the risk of fire, electric shock, or other personal injury.

Locating: Slots and openings in the cabinet are provided for ventilation to protect it from overheating. Do not block these openings or allow them to be blocked by placing the receiver on a bed, sofa, or other similar surface, nor should it be placed over a radiator or heat register.

Power-Cord Protection: Place the power-supply cord out of the way, where it will not be walked on. Please take special attentions to cords at plugs, convenience receptacles, and the point where they exit from the unit.

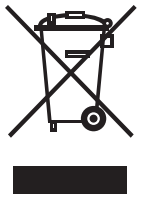
Object and Liquid Entry: Never put objects of any kind into this receiver through openings, as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill any liquid on the receiver.

Note: Moisture may be formed on the lens when the unit is suddenly moved from a cold environment or an air-condition room to a warm place or immediately after a heater has been turned on or in a steamy or very humid room. If the moisture forms inside the unit, it may not operate properly. To correct this problem, turn on the power and wait about two hours for the moisture to evaporate.

Parts Replacement: When the unit parts need to be replaced, user should make sure the service technician use the replacement parts specified by the manufacturer or having the same characteristics as the original part. Unauthorized replacement may put the unit In the risk of fire, electric shock or other hazards.

Safety Check: After all the maintenances and repairs are done, user is required to request the service technician to conduct the overall safety check to ensure the machine is In the proper condition.

Environment Protection 7



Attention!

Your product Is marked with this symbol. It means that used electrical and electronic products should not be mixed with general household waste. There is a separate collection system for these products.

Information on Disposal for Users (private households) in the European Union.

Used electrical and electronic equipment must be treated separately and In accordance with legislation that requires proper treatment, recovery and recycling of used electrical and electronic equipment.

Following the implementation by member states, private households within the EU states may return their used electrical and electronic equipment to designated collection facilities free of charge*. In some countries* your local retailer may also take back your old product free of charge if you purchase a similar new one.

*) Please contact your local authority for further details. If your used electrical or electronic equipment has batteries or accumulators, please dispose of these separately beforehand according to local requirements.

By disposing of this product correctly you will help ensure that the waste undergoes the necessary treatment, recovery and recycling and thus prevent potential negative effects on the environment and human health which could otherwise arise due to inappropriate waste handling.

Information on Disposal for Business Users

In the European Union. If the product is used for business purposes and you want to discard It, please contact your dealer who will inform you about the take-back of the product. You might be charged for the costs arising from take-back and recycling Small products (and small amounts)might be taken back by your local collection facilities.

In other Countries outside the EU.

If you wish to discard of this product, please contact your local authorities and ask for the correct method of disposal.

Technical Specification 8

Main processor:	ALI M3601
Input plugs:	F-type, IEC 169-2, female
Frequency range:	VHF III: MHz to 174 - 230 MHz; UHF IV: MHz to 470 - 606 MHz; UHF V: MHz to 606 - 862 MHz
Input level:	-75 dBm—-20 dBm
Antenna power:	Voltage max: 5 V, Current max: 50 mA
FET Mode:	2K, 8K
Channel bandwith:	6, 7, 8MHz
Constellation:	QPSK, 16QAM, 64QAM
Code rate:	1/2, 2/3, 3/4, 5/6, 7/8
Guard interval:	1/4, 1/8, 1/16, 1/32
Transport stream:	MPEG-2 ISO/IEC 13818-1, MPEG-4 ISO/IEC 14496-1,
MPEG Profile level:	MPEG-2 MP@ML, MPEG-2 MP@HL, MPEG-4 AVC/H.264 HP@L4
Aspect ratio:	4:3 Letter Box, 4:3 Pan Scan, 16:9
Video resolution:	720*576 [PAL], 720*480 [NTSC], 1920*1080i
Audio decoding:	MPEG/MusiCam Layer 1, MPEG/MusiCam Layer 2, Dolby AC-3
Audio mode:	Stereo, Join Stereo, Mono
Sampling rate:	32 kHz, 44,1 khz, 48 kHz
Rear panel:	TV Scart, HDMI, USB
Input voltage:	AC 50/60Hz, 230 V
Power consumption:	8 W max.
Standby power consumption:	<1 W max.
Size:	180 mm x 35 mm x 110 mm
Weight (netto):	<0,7 kg
Operating temperature:	5 °C — 40 °C
Storage temperature:	-5 °C — 60 °C